KIDNEY INTERNATIONAL

Volume 41, Number 1, January 1992

Official Journal of the International Society of Nephrology

Le Journal Official de la Société Internationale de Néphrologie

Table of contents

EDITORIAL

Kidney International: Perspectives from the editors. *Thomas E. Andreoli* 1

EDITORIAL REVIEW

Induction and progression of experimental lupus nephritis: Exploration of a pathogenic pathway. *Jan A. Bruijn, Eline C. Bergijk, Emile de Heer, Gert Jan Fleuren, and Philip J. Hoedemaeker* .. 5

LABORATORY INVESTIGATION

Biosynthetic and proliferative characteristics of tubulointerstitial fibroblasts probed with paracrine cytokines. *René J. Alvarez, Mae Jane Sun, Thomas P. Haverty, Renato V. Iozzo, Jeanne C. Myers, and Eric G. Neilson* 14

Transgenic rats carrying the mouse renin gene—Morphological characterization of a low-renin hypertension model. *Sebastian Bachman, Jörg Peters, Eberhard Engler, Detlev Ganten, and John Mullins* 24

Regulation of atrial natriuretic peptide-stimulated cGMP production in the inner medulla. *Tomas Berl, Julie Mansour, and Judith H. Veis* 37

Relationship between intracellular proton buffering capacity and intracellular pH. *David J.A. Goldsmith and Philip J. Hilton* 43

A high-affinity folate binding protein in proximal tubule cells of human kidney. *Jan Holm, Steen Ingemann Hansen, Mimi Høier-Madsen, and Leif Bostad* 50

Renal tubular epithelial cells express osteonectin in vivo and in vitro. *Jeffrey B. Kopp, Paolo Bianco, Marian F. Young, John D. Termine, and Pamela Gehron Robey* 56

Induction of "wire-loop" lesions by murine monoclonal IgG3 cryoglobulins. *Robert Lemoine, Thierry Berney, Takanori Shibata, Thierry Fulpius, Yuichi Gyotoku, Hajime Shimada, Shigemasa Sawada, and Shozo Izui* 65

Cisplatin-induced alterations in renal structure, ammoniagenesis and gluconeogenesis of rats. *Kazuo Nosaka, Jojiro Nakada, and Hitoshi Endou* 73

Protection from hypoxemia-induced renal dysfunction by the thiophosphate WR-2721. *Anna Pedrotti, Jean-Philippe Bonjour, and Jean-Pierre Guignard* 80

Isozymes of cyclic-3′, 5′-nucleotide phosphodiesterases in renal epithelial LLC-PK_1 cells. *Mark E. Rassier, Steven J. McIntyre, Mario Yamaki, Shigeyuki Takeda, Jiann-Trzuo Lin, and Thomas P. Dousa* 88

Role of the 5-lipooxygenase pathway in obstructive nephropathy. *Alvaro A. Reyes, James Lefkowith, Jeffrey Pippin, and Saulo Klahr* 100

Elevated glucose stimulates TGFβ gene expression and bioactivity in proximal tubule. *Michael V. Rocco, Ying Chen, Stanley Goldfarb, and Fuad N. Ziyadeh* 107

A monoclonal antibody against GBM heparan sulfate induces an acute selective proteinuria in rats. *Jacob van den Born, Lambert P.W.J. van den Heuvel, Marinka A.H. Bakker, Jacques H. Veerkamp, Karel J.M. Assmann, and Jo H.M. Berden* 115

Vasoactive agents affect growth and protein synthesis of cultured rat mesangial cells. *Albert Wolthuis, Adriana Boes, H. Peter Rodemann, and Joris Grond* 124

Contents continued on next page

CLINICAL INVESTIGATION

Elevation of albumin synthesis rates in nephrotic patients measured with [1-^{13}C]leucine. *Peter E. Ballmer, Barbara K. Weber, Prabir Roy-Chaudhury, Margaret A. McNurlan, Heather Watson, David A. Power, and Peter J. Garlick* 132

Stone-forming potential of milk or calcium-fortified orange juice in idiopathic hypercalciuric adults. *Fredric L. Coe, Joan H. Parks, and D. Ronald Webb* 139

Induction of a subpopulation of suppressor cells by a single blood transfusion. *Uzi Gafter, Yona Kalechman, and Benjamin Sredni* 143

Calcium oxalate crystallization in urine: Role of urate and glycosaminoglycans. *Phulwinder K. Grover, Rosemary L. Ryall, and Villis R. Marshall* 149

Histopathological findings in well-functioning, long-term renal allografts. *Helena M. Isoniemi, Leena Krogerus, Eeva van Willebrand, Eero Taskinen, Juhani Ahonen, and Pekka Häyry* 155

Free and total 1,25-dihydroxyvitamin D levels in subjects with renal disease. *Karl G. Koenig, Jill S. Lindberg, Joseph E. Zerwekh, Paulette K. Padalino, Howard M. Cushner, and John B. Copley* 161

The vasorelaxant effects of acetate: Role of adenosine, glycolysis, lyotropism, and pH_i and Ca_i^{2+}. *Charles W. Nutting, Saiful Islam, Minghao Ye, Daniel C. Batlle, and John T. Daugirdas* 166

Analysis of HLA class II genes in Japanese patients with idiopathic membranous glomerulonephritis. *Satoru Ogahara, Setsuya Naito, Kasumi Abe, Isao Michinaga, and Kikuo Arakawa* 175

Effects of dietary protein in patients with chronic renal transplant rejection. *Abdulla K. Salahudeen, Thomas H. Hostetter, Susan K. Raatz, and Mark E. Rosenberg* 183

In vitro and in vivo interleukin-8 production in human renal cortical epithelia. *Robert L. Schmouder, Robert M. Strieter, Roger C. Wiggins, Stephen W. Chensue, and Steven L. Kunkel.* 191

Effects of thromboxane synthase inhibition with CGS 13080 in human cyclosporine nephrotoxicity. *Stephen R. Smith, Elizabeth A. Creech, A. Victoria Schaffer, Louis L. Martin, Ashok Rakhit, Frank L. Douglas, Paul E. Klotman, and Thomas M. Coffman* 199

Effects of angiotensin converting enzyme inhibition in adult polycysic kidney disease. *Michael L. Watson, Anne H. Macnicol, Paul L. Allan, and Alan F. Wright* 206

TECHNICAL NOTE

The parietal podocyte: A study of the vascular pole of the human glomerulus. *Ian W. Gibson, Ian Downie, Thomas T. Downie, Seon W. Han, Ian A.R. More, and George B.M. Lindop* 211

A new method culturing renal cells under permanent superfusion and producing a luminal-basal medium gradient. *Will W. Minuth, Rolf Dermietzel, Sabine Kloth, and Barbara Hennerkes* 215

RAPID COMMUNICATION

Isolation and characterization of cDNA from renal tubular epithelium encoding murine Rantes. *Peter Heeger, Gunter Wolf, Catherine Meyers, Mae Jane Sun, Susan C. O'Farrell, Alan M. Krensky, and Eric G. Neilson* 220

NEPHROLOGY FORUM

Regeneration after acute tubular necrosis. *F. Gary Toback* 226

INTERNATIONAL SOCIETY OF NEPHROLOGY

Reduced Subscription Rates for Fellows 248

Meetings 249

Awards and Grants 253

Instructions for Authors on pages xxvii–xxix

KIDNEY INTERNATIONAL

Volume 41, Number 2, February 1992

Official Journal of the International Society of Nephrology

Le Journal Officiel de la Société Internationale de Néphrologie

Table of contents

EDITORIAL REVIEW

Regulation of Na^+ channels in the cortical collecting duct by AVP and mineralocorticoids. *James A. Schafer and C. Terrance Hawk* 255

LABORATORY INVESTIGATION

Platelet activating factor inhibits Cl and K transport in the medullary thick ascending limb. *Claire Bailly, Catherine Bartlet-Bas, and Claude Amiel* 269

Pressure dependent modulation of renin release in isolated perfused glomeruli. *H. Andreas Bock, Monika Hermle, Felix P. Brunner, and Gilbert Thiel* 275

Calcium transport through the luminal membrane of the distal tubule. I. Interrelationship with sodium. *Michèle G. Brunette, Johanne Mailloux, and Daniel Lajeunesse* 281

Calcium transport by the luminal membrane of distal tubule. II. Effect of pH, electrical potential and calcium channel inhibitors. *Michèle G. Brunette, Johanne Mailloux, and Daniel Lajeunesse* 289

Glomerular cell proliferation and PDGF expression precede glomerulosclerosis in the remnant kidney model. *Jürgen Floege, Mark W. Burns, Charles E. Alpers, Ashio Yoshimura, Pamela Pritzl, Katherine Gordon, Ronald A. Seifert, Daniel F. Bowen-Pope, William G. Couser, and Richard J. Johnson* 297

Glomerular permselectivity is dependent on adequate serum concentrations of orosomucoid. *Börje S. Haraldsson, Eva K. A. Johnsson, and Bengt Rippe* 310

Localization of overexposed c-*myc* mRNA in polycystic kidneys of the *cpk* mouse. *Michael A. Harding, Vincent H. Gattone II, Jared J. Grantham, and James P. Calvet* 317

Adrenalectomy ameliorates ablative nephropathy in the rat independently of corticosterone maintenance level. *Zhi Yun Quan, Mackenzie Walser, and Gary S. Hill* 326

Immunocytochemical localization of proANF 1-30, proANF 31-67, and atrial natriuretic factor in the kidney. *German Ramirez, Sabiha R. Saba, John R. Dietz, and David L. Vesely* 334

Fluoride flux in the rabbit CCD: A pH-dependent event. *Alexander J. Rouch, Gary M. Whitford, and Harold T. Campbell* 342

Regulation of endothelin-1 production in cultured rat mesangial cells. *Hisato Sakamoto, Sei Sasaki, Yoshiko Nakamura, Kiyohide Fushimi, and Fumiaki Marumo* 350

Growth hormone secretion from the pituitary cells in chronic renal insufficiency. *Fernando Santos, James C. M. Chan, Richard J. Krieg, Kazuhiko Niimi, James D. Hanna, Martha D. Wellons, and Lawrence F. Poletti* 356

CLINICAL INVESTIGATION

Glomerular tissue factor stimulates thromboxane synthesis in human platelets via thrombin generation. *Raymond Ardaillou, Marcelle Bens, and Thomas S. Edgington* 361

Effect of prolonged bicarbonate administration on plasma potassium in terminal renal failure. *Alfred Blumberg, Peter Weidmann, and Paolo Ferrari* 369

Anti-myeloperoxidase antibodies stimulate neutrophils to damage human endothelial cells. *Brian H. Ewert, J. Charles Jennette, and Ronald J. Falk* 375

Contents continued on next page

Evidence for renal vasodilation in pre-dialysis patients during correction of anemia by erythropoietin. *Leon A. M. Frenken, Jack F. M. Wetzels, Henk E. Sluiter, and Robert A. P. Koene* .. 384

Modulation of granulocyte LAM-1 and MAC-1 during dialysis—A prospective, randomized controlled trial. *Jonathan Himmelfarb, Philippe Zaoui, Raymond Hakim, with the technical assistance of Diane Holbrook* 388

Effects of high glucose on cellular proliferation and fibronectin production by cultured human mesangial cells. *N. Stanley Nahman, Jr., Karen L. Leonhart, Fernando G. Cosio, and Caroline L. Hebert* 396

EDRF role in renal function and blood pressure of normal rats and rats with obstructive uropathy. *Alvaro A. Reyes, Daniel Martin, Steve Settle, and Saulo Klahr* 403

Spectrum of renal involvement in familial Mediterranean fever. *Riyad Said, Yousef Hamzeh, Salwa Said, Mesleh Tarawneh, and Mohamed Al-Khateeb* 414

Microsomal liver function declines steadily after kidney grafting: A three to five year follow-up. *Heinz J. Schaad, Brigitte M. Frey, Eberhard L. Renner, Rudolf Preisig, and Felix J. Frey* 420

Focal glomerulosclerosis in idiopathic membranous glomerulonephritis. *Sachiko Wakai, and Alex B. Magil* 428

TECHNICAL NOTE

Rapid measurement of glomerular filtration rate in small animals. *Yasuo Ido, Ronald G. Tilton, Katherine Chang, Giuseppe Pugliese, and Joseph R. Williamson* 435

Assessment of post-dialysis dry weight: An application of the conductivity measurement method. *Peter M. Kouw, Cornelis G. Olthof, Piet M. ter Wee, Liem P. Oe, Ab. J. M. Donker, Hans Schneider, and Peter M. J. M. de Vries* 440

The diagnostic yield of transjugular renal biopsy. Experience in 200 cases. *Frédéric Mal, Alain Meyrier, Patrice Callard, Dieter Kleinknecht, Jean-Jacques Altmann, and Michel Beaugrand* .. 445

Assessment of glomerular filtration rate in small animals by intraperitoneal ^{99m}Tc DTPA. *Brian J. Nankivell, Richard M. Fawdry, and David C. H. Harris* 450

A cytochemical procedure for determination of Na^+,K^+-ATPase activity in MDCK cells. *Mehrak Shahedi, Kathleen Laborde, Brigitte Lelongt, Olivier Oudar, and Charles Sachs* 455

NEPHROLOGY FORUM

Scleroderma and the kidney. *John F. Donohoe* 462

ABSTRACT

Gesellschaft für Nephrologie 478

Scandinavian Society of Nephrology 499

INTERNATIONAL SOCIETY OF NEPHROLOGY

Special Offers for Fellows 515

Meetings 516

Awards and Grants 519

Errata 521

Instructions for Authors on page xvi

KIDNEY INTERNATIONAL

Volume 41, Number 3, March 1992

Official Journal of the International Society of Nephrology

Le Journal Officiel de la Société Internationale de Néphrologie

Table of contents

SYMPOSIUM ON MESANGIAL CELLS AND EXTRACELLULAR MATRIX

Introduction. *Joseph A. Madri and R. Bernd Sterzel* 523

OVERVIEW

The pathobiology of the mesangium. *Michael Kashgarian and R. Bernd Sterzel* 524

The biology of myofibroblasts. *Giulio Gabbiani* 530

Changes in glomerular structure following acute mesangial failure in the isolated perfused kidney. *Tatsuo Sakai, Kevin V. Lemley, Eberhard Hackenthal, Michio Nagata, Rainer Nobiling, and Wilhelm Kriz* 533

SIGNAL TRANSDUCTION

Cytosolic and nuclear signaling by endothelin peptides: Mesangial response to glomerular injury. *Michael S. Simonson, Jennifer M. Jones, and Michael J. Dunn* 542

How does interleukin-1 activate cells? *Luke A.J. O'Neil* 546

The Egr transcription factor family: From signal transduction to kidney differentiation. *Vikas P. Sukhatme* 550

Thromboxane A_2, prostaglandins, and mesangial cell proliferation. *Paolo Menè, Francesco Pugliese, Angela D'Agostino, and Giulio A. Cinotti* 554

TRANSFORMING GROWTH FACTOR

TGF-β: Regulation of extracellular matrix. *Anita B. Roberts, Bryan K. McCune, and Michael B. Sporn* 557

Matrix composition, organization and soluble factors: Modulators of microvascular cell differentiation in vitro. *Joseph A. Madri and Martin Marx* 560

Antagonists of transforming growth factor-β: A novel approach to treatment of glomerulonephritis and prevention of glomerulosclerosis. *Wayne A. Border, Nancy A. Noble, Tatsuo Yamamoto, Suguru Tomooka, and Shoji Kagami* 566

PLATELET-DERIVED GROWTH FACTOR

Platelet-derived growth factor: Isoform-specific signaling via heterodimeric or homodimeric receptor complexes. *Carl-Henrik Heldin, Arne Östman, Anders Eriksson, Agneta Siegbahn, Lena Claesson-Welsh, and Bengt Westermark* 571

Platelet-derived growth factor receptors and phospholipase C activation. *Thomas O. Daniel and Dana A. Kumjian* 575

Platelet-derived growth factor and mesangial cells. *Hanna E. Abboud* 581

Platelet-derived growth factor expression in a transgenic model. *Jochen W.U. Fries and Tucker Collins* 584

Platelet-derived growth factor: A potentially important cytokine in glomerular disease. *Richard Johnson, Hiroyuki Iida, Ashio Yoshimura, Jurgen Floege, and Daniel F. Bowen-Pope* 590

CYTOKINES

Interleukin-1 and the mesangial cell. *John R. Sedor, Yuichi Nakazato, and Martha Konieczkowski* 595

Contents continued on next page

Tumor necrosis factor alpha and mesangial cells. *Laurent Baud, Bruno Fouqueray, Carole Philippe, and Abdelaziz Amrani* 600
Interleukin-6: An autocrine regulator of mesangial cell growth. *David L. Coleman and Christian Ruef* 604

CELL-CELL INTERACTION

Apoptosis: A mechanism for regulation of the cell complement of inflamed glomeruli. *John Savill* 607
Leukocyte integrin activation. *Nancy Hogg, Robert Bennett, Carlos Cabanas, and Ian Dransfield* 613
Role of intercellular adhesion molecule-1 in the inflammatory response. *Robert Rothlein and Craig Wegner* 617

CELL-MATRIX INTERACTION

Basement membrane proteins. *Manfred Weber* 620
Tenascin: An extracellular matrix protein involved in morphogenesis of epithelial organs. *Matthias Chiquet* 629
Cellular response to extracellular matrix. *K. von der Mark, H. von der Mark, and S. Goodman* . 632
Integrins in developing, normal and malignant human kidney. *Matti Korhonen, Liisa Laitinen, Jari Ylänne, Victor E. Gould, and Ismo Virtanen* 641
Peptide recognition motifs involved in the binding of integrins to their ligands. *Martin J. Humphries* 645
$\alpha 6\beta 1$ integrin and laminin E8: An increasingly complex simple story. *Simon L. Goodman* 650

INTEGRINS, MATRIX, ETC.

Development of tubular and glomerular cells of the kidney. *Lydia Sorokin and Peter Ekblom* ... 657
Moesin, a new cytoskeletal protein and constituent of filopodia: Its role in cellular functions. *Heinz Furthmayr, Wolfgang Lankes, and Manuel Amieva* 665
Proteinases and glomerular matrix turnover. *Malcolm Davies, John Martin, Gareth J. Thomas, and David H. Lovett* 671
Thrombospondin and tumor necrosis factor. *Vishva M. Dixit* 679

NEPHROLOGY FORUM

Cytokines: Agents provacateurs in hemodialysis? *Charles A. Dinarello* 683

ABSTRACTS

International Society of Nephrology Forefronts in Nephrology: Mesangial Cells and Extracellular Matrix 695

INTERNATIONAL SOCIETY OF NEPHROLOGY 708

KIDNEY INTERNATIONAL

Volume 41, Number 4, April 1992

Official Journal of the International Society of Nephrology

Le Journal Officiel de la Société Internationale de Néphrologie

Table of contents

SYMPOSIUM ON DIABETIC NEPHROPATHY

Introduction. *Michael Mauer, Carl Erik Mogensen, and GianCarlo Viberti* 717

EPIDEMIOLOGY

Is diabetic nephropathy an inherited complication? *Knut Borch-Johnsen, Kirsten Nørgaard, Eva Hommel, Elisabeth R. Mathiesen, Jan Skov Jensen, Torsten Deckert, and Hans-Henrick Parving* 719

Predisposition to hypertension: Risk factor nephropathy and hypertension in IDDM. *Joshua Barzilay, James H. Warram, Marianna Bak, Lori M.B. Laffel, Mitzy Canessa, and Andrzej S. Krolewski* 723

Eight to nine year mortality in known non-insulin dependent diabetics and controls. *Else Marie Damsgaard, Anders Frøland, Ole Dan Jørgensen, and Carl Erik Mogensen* 731

STRUCTURAL-FUNCTIONAL RELATIONSHIPS

Relationship of systemic blood pressure to nephropathology in insulin-dependent diabetes mellitus. *S. Michael Mauer, David E.R. Sutherland, and Michael W. Steffes* 736

Glomerular structure in type-1 (insulin-dependent) diabetic patients with normo- and microalbuminuria. *James D. Walker, Collin F. Close, Sharon L. Jones, Martin Rafftery, Harry Keen, GianCarlo Viberti, and Ruth Østerby* 741

An electron microscopic study of glomeruli in Japanese patients with non-insulin dependent diabetes mellitus. *Hiroshi Hayashi, Ryou Karasawa, Hian Inn, Takao Saitou, Mitsuhiro Ueno, Shinichi Nishi, Yoshiki Suzuki, Sojiro Ogino, Yuichiro Maruyama, Yutaka Kouda, and Masaaki Arakawa* 749

Prevalence and causes of albuminuria in non-insulin-dependent diabetic patients. *Hans-Henrik Parving, Mari-Anne Gall, Peter Skøtt, Hans E. Jørgensen, Hans Løkkegaard, Finn Jørgensen, Bent Nielsen, and Svend Larsen* 758

BIOCHEMISTRY

Inhibition of glomerular glucosaminyl N-deacetylase in diabetic rats. *Allan Kofoed-Enevoldsen*. 763

Early increased renal procallogen α1(IV) mRNA levels in streptozotocin induced diabetes. *Chun-Gyoo Ihm, Grace S.L. Lee, Cynthia C. Nast, Alexander Artishevsky, Roy Guillermo, Patricia S. Levin, Richard J. Glassock, and Sharon G. Adler* 768

Diabetes-induced glomerular dysfunction: Links to a more reduced cytosolic ratio of NADH/NAD^+. *Ronald G. Tilton, Lisa D. Baier, Judith E. Harlow, Samuel R. Smith, Eva Ostrow, and Joseph R. Williamson* 778

HORMONAL

Effects of diabetes and insulin on expression of kallikrein and renin genes in the kidney. *Ayad A. Jaffa, Karl X. Chai, Julie Chao, Lee Chao, and Ronald K. Mayfield* 789

Renin and angiotensinogen gene expression in experimental diabetes mellitus. *Ricardo Correa-Rotter, Thomas H. Hostetter, and Mark E. Rosenberg* 796

Octreotide administration in diabetic rats: Effects on renal hypertrophy and urinary albumin excretion. *Allan Flyvbjerg, Sally M. Marshall, Jan Frystyk, Klavs W. Hansen, Alan G. Harris, and Hans Ørskov* 805

Contents continued on next page

Relationships among natriuresis, atrial natriuretic peptide and insulin in insulin-dependent diabetes. *Paola Fioretto, Bruno Muollo, Pier Paolo Faronato, Giuseppe Opocher, Roberto Trevisan, Antonio Tiengo, Franco Mantero, Giuseppe Remuzzi, Gaetano Crepaldi, and Romano Nosadini* 813

EARLY PHASES OF DIABETIC NEPHROPATHY: HYPERFILTRATION-MICROALBUMINURIA

Increased glomerular filtration rate as a predictor of diabetic nephropathy—An 8-year prospective study. *Susanne Rudberg, Bengt Persson, and Gisela Dahlquist* 822

Renal hemodynamics in newly presenting non-insulin dependent diabetes mellitus. *Jiten P. Vora, John Dolben, John D. Dean, David Thomas, John D. Williams, David R. Owens, and John R. Peters* 829

Prognostic significance of microalbuminuria in insulin-dependent diabetes mellitus: A twenty-three year follow-up study. *Jeannie W.C. Messent, Thomas G. Elliott, Ronald D. Hill, R. John Jarrett, Harry Keen, and GianCarlo Viberti* 836

Glomerular size-selectivity and microalbuminuria in early diabetic glomerular disease. *John D. Scandling, and Bryan D. Myers* 840

Ambulatory blood pressure in microalbuminuric type 1 diabetic patients. *Klavs W. Hansen, Cramer K. Christensen, Per H. Anderson, Margrethe Mau Pederson, Jens S. Christiansen, and Carl Erik Mogensen* 847

HYPERTENSION AND SODIUM/LITHIUM

Clustering of risk factors in hypertensive insulin-dependent diabetics with high sodium-lithium countertransport. *Roberto Trevisan, Romano Nosadini, Paola Fioretto, Andrea Semplicini, Valter Donadon, Alessandro Doria, Gianluca Nicolosi, Danilo Zanuttini, Maria Rita Cipollina, Luigi Lusiani, Angelo Avogaro, Gaetano Crepaldi, and GianCarlo Viberti* 855

Is increased erythrocyte sodium-lithium countertransport a useful marker for diabetic nephropathy? *Lammy D. Elving, Jack F.M. Wetzels, Jan J.H.H.M. De Pont, and Jo H.M. Berden* 862

Lipids and cellular Na^+/H^+ antiport activity in diabetic nephropathy. *Leong L. Ng and Joan E. Davies* 872

Prevalence of raised sodium-lithium countertransport activity in type 1 diabetic patients. *José B. Lopes de Faria, Rogério Friedman, Taimur Tariq, and GianCarlo Viberti* 877

INTERVENTION

Effects of ACE inhibition supplementary to beta blockers and diuretics in early diabetic nephropathy. *Margrethe Mau Pederson, Klavs W. Hansen, Anita Schmitz, Keld Sørensen, Cramer K. Christensen, and Carl Erik Mogensen* 883

Nifedipine versus fosinopril in uninephrectomized diabetic rats. *Sharon Anderson, Helmut G. Rennke, and Barry M. Brenner, with the technical assistance of Miguel A. Zayas, Helen M. Lafferty, Julia L. Troy, Deborah J. Sandstrom* 891

Antihypertensive therapy in a model combining spontaneous hypertension with diabetes. *Mark E. Cooper, Jon R. Rumble, Terri J. Allen, Richard C. O'Brien, George Jerums, and Austin E. Doyle* 898

Angiotensin converting enzyme inhibition and calcium channel blockade in incipient diabetic nephropathy. *George Jerums, Terri Allen, Con Tsalamandris, and Mark E. Cooper, for the Melbourne Diabetic Nephropathy Study Group* 904

Treatment of arterial hypertension in diabetic humans: Importance of therapeutic selection. *George L. Bakris, Bradley W. Barnhill, and Rebecca Sadler* 912

Long-term glycemic control and kidney function in insulin-dependent diabetes mellitus. *Knut Dahl-Jørgensen, Trine Bjøro, Peter Kierulf, Leiv Sandvik, Hans Jacob Bangstad, and Kristian F. Hanssen* 920

Simultaneous pancreas-kidney transplant versus kidney transplant alone in diabetic patients. *Alan H.S. Cheung, David E.R. Sutherland, Kristen J. Gillingham, Lois E. McHugh, Kay C. Moudry-Munns, David L. Dunn, John S. Najarian, and Arthur J. Matas* 924

INVITED CONTRIBUTION

From the President: The International Society of Nephrology and Its Congresses. *Roscoe R. Robinson* 930

LABORATORY INVESTIGATION

Urinary C3dg and C5b-9 indicate active immune disease in human membranous nephropathy. *Paul E. Brenchley, Beatrice Coupes, Colin D. Short, Donal J. O'Donoghue, Francis W. Ballardie, and Netar P. Mallick* 933

Intrarenal distribution of clusterin following reduction of renal mass. *Ricardo Correa-Rotter, Thomas H. Hostetter, J. Carlos Manivel, Allison A. Eddy, and Mark E. Rosenberg*..... 938

Mesangial expression of intercellular adhesion molecule-1 in primary glomerulosclerosis. *Antonio Dal Canton, Giorgio Fuiano, Vincenzo Sepe, Alfredo Caglioti, and Soldano Ferrone*..... 951

HIV infects glomerular endothelial and mesangial but not epithelial cells in vitro. *Dollie F. Green, Lionel Resnick, and Jacques J. Bourgoignie* 956

Improved left ventricular contractility with cool temperature hemodialysis. *Freda L. Levy, Paul A. Grayburn, Charles J. Foulks, M. Elizabeth Brickner, and William L. Henrich* 961

Renal hypertrophy in streptozotocin diabetic rats: Role of proteolytic lysosomal enzymes. *Christoph J. Olbricht and Beate Geissinger, with the technical assistance of Elisabeth Gutjahr*. 966

Thromboxane receptor blockade reduces renal injury in murine lupus nephritis. *Robert F. Spurney, Pang-Yen Fan, Phillip Ruiz, Fred Sanfilippo, David S. Pisetsky, and Thomas M. Coffman* 973

Sphingomyelin and cholesterol modulate sodium coupled uptakes in proximal tubular cells. *François Vrtovsnik, El Hossain El Yandouzi, Christian Le Grimellec, and Gérard Friedlander* . 983

Reduced glomerular thromboxane receptor sites and vasoconstrictor responses in diabetic rats. *Barry M. Wilkes, Randy Kaplan, Peter F. Mento, Hagop S. Aynedjian, Carolyn M. Macica, Detlef Schlondorff, and Norman Bank* 992

Protein increases glomerular eicosanoid production and activity of related enzymes. *Hiroyuki Yanagisawa, Jerry Morrissey, Jesse Yates, Catalina Hayes, and Saulo Klahr* 1000

Reduced activity of antioxidant enzymes underlies contrast media-induced renal injury in volume depletion. *Toshimasa Yoshioka, Agnes Fogo, and Jeffrey K. Beckman* 1008

CLINICAL INVESTIGATION

Nutritional status and muscle amino acids in children with end-stage renal failure. *Alberto Canepa, José C. Divino Filho, Ann-Marie Forsberg, Francesco Perfumo, Alba Carrea, Rosanna Gusmano, and Jonas Bergström*..... 1016

Hemodialysis prescription and delivery in a metropolitan community. *James A. Delmez and David W. Windus, with the Saint Louis Nephrology Study Group* 1023

Simultaneous analysis of morbidity and mortality factors in chronic hemodialysis patients. *Juan M. Fernández, Maria E. Carbonell, Nelson Mazzuchi, and Dante Petruccelli* 1029

Comparison of hemodialysis and hemodiafiltration: A long-term longitudinal study. *Peter G. Kerr, Angel Argiles, Jean-Louis Flavier, Bernard Canaud, and Charles M. Mion* 1035

Compliance and reactivity of the peripheral venous system in chronic intermittent hemodialysis. *Jeroen P. Kooman, Jef A.G. Wijnen, Petra Draaijer, Luc M.A.B. van Bortel, Ulrich Gladziwa, Henricus G. Peltenburg, Harry A.J. Struyker-Boudier, Johannes P. van Hooff, and Karel M.L. Leunissen*..... 1041

Intravenous 1,25 dihydroxycholecalciferol corrects glucose intolerance in hemodialysis patients. *Robert H.K. Mak*..... 1049

Risk factors for dialysis-associated hepatitis C in Venezuela. *Grete Y. Muller, Mercedes E. Zabaleta, Anabella Arminio, Carmen J. Colmenares, Freya I. Capriles, Nicolás E. Bianco, and Irma V. Machado* 1055

HLA class II specificities in vasculitis with antibodies to neutrophil cytoplasmic antigens. *Stephen J.W. Spencer, Aine Burns, Gillian Gaskin, Charles D. Pusey, and Andrew J. Rees* 1059

Ventilatory and metabolic changes during high efficiency hemodialysis. *Tommy Symreng, Michael J. Flanigan, and Victoria S. Lim* 1064

Heparan sulfate proteoglycan in the glomerular basement membrane in type 1 diabetes mellitus. *Robert L. Vernier, Michael W. Steffes, Susan Sisson-Ross, and S. Michael Mauer* 1070

TECHNICAL NOTE

Measurement of GFR with a single intravenous injection of nonradioactive iothalamate. *Flavio Gaspari, Lidia Mosconi, Gianluigi Viganò, Norberto Perico, Leonarda Torre, Giorgio Virotta, Cesare Bertocchi, Giuseppe Remuzzi, and Piero Ruggenenti* 1081

Estimation of glomerular volume: A comparison of four methods. *Pascale H. Lane, Michael W. Steffes, and S. Michael Mauer* 1085

NEPHROLOGY FORUM

Molecular pathogenesis of membranous nephropathy. *Dontscho Kerjaschki* 1090

INTERNATIONAL SOCIETY OF NEPHROLOGY

Reduced Subscription rates for Fellows 1106

Meetings 1108

Awards and Grants 1113

Erratum 1114

Instructions for Authors on page xxxiii

KIDNEY INTERNATIONAL

Volume 41, Number 5, May 1992

Official Journal of the International Society of Nephrology

Le Journal Official de la Société Internationale de Néphrologie

Table of contents

EDITORIAL REVIEW

Atrial natriuretic factor: Its (patho)physiological significance in humans. *Dick de Zeeuw, Wilbert M.I. Janssen, and Paul E. de Jong* 1115

LABORATORY INVESTIGATION

Enhanced expression of "muscle-specific" actin in glomerulonephritis. *Charles E. Alpers, Kelly L. Hudkins, Allen M. Gown, and Richard J. Johnson* 1134

Axial heterogeneity of adenosine transport and metabolism in the rabbit proximal tubule. *Delon W. Barfuss, William P. McCann, and Richard E. Katholi* 1143

Response of cortical collecting ducts from remnant kidneys to arginine vasopressin. *Melvin Bonilla-Felix, L. Lee Hamm, John Herndon, and V. Matti Vehaskari* 1150

Fifteen-S-hydroxyeicosatetraenoic acid (15-S-HETE) antangonizes the chemotactic action and glomerular synthesis of leukotriene B4 in the rat. *Danny B. Fischer, John W. Christman, and Kamal F. Badr* 1155

Interactions of LDL and modified LDL with mesangial cells and matrix. *Salil Gupta, Vincent Rifici, Susan Crowley, Michael Brownlee, Zihe Shan, and Detlef Schlondorff* 1161

Quantification and modulation of thrombomodulin activity in isolated rat and human glomeruli. *Ci Jiang He and Alain Kanfer* 1170

Carbamylation-induced alterations in low-density lipoprotein metabolism. *Sohvi Hörkkö, Markku J. Savolainen, Kari Kervinen, and Y. Antero Kesäniemi* 1175

Chronic neutral phosphate supplementation induces sustained, renal metabolic alkalosis. *Pascal Houillier, Pascale Borensztein, Maurice Bichara, Michel Paillard, and Alain Prigent* 1182

Experimental model of lead nephropathy. I. Continuous high-dose lead administration. *Farhad Khalil-Manesh, Harvey C. Gonick, Arthur H. Cohen, Rossella Alinovi, Enrico Bergamaschi, Antonio Mutti, and Victor J. Rosen* 1192

Renal localization of the constitutive 73-kDa heat-shock protein in normal and PAN rats. *Atsushi Komatsuda, Hideki Wakui, Hirokazu Imai, Yasushi Nakamoto, Akira B. Miura, Hideaki Itoh, and Yohtalou Tashima* 1204

Production of extracellular matrix by glomerular epithelial cells is regulated by transforming growth factor-β1. *Takamichi Nakamura, Diane Miller, Erkki Ruoslahti, and Wayne A. Border* . 1213

In vitro formation and expansion of cysts derived from human renal cortex epithelial cells. *Timothy K. Neufeld, David Douglass, Michael Grant, Min Ye, Fred Silva, Tibor Nadasdy, and Jared J. Grantham* 1222

Free cadmium activity in renal epithelial cells is enhanced by Mg2+ depletion. *Gary A. Quamme* 1237

Contents continued on next page

Essential fatty acid deficiency normalizes function and histology in rat nephrotoxic nephritis. *Kihito Takahashi, Tetsuo Kato, George F. Schreiner, Joan Ebert, and Kamal F. Badr* 1245

Interactions of hypercholesterolemia and hypertension in initiation of glomerular injury. *Jonathan P. Tolins, Bradford G. Stone, and Leopoldo Raij* 1254

Modulation of glomerular proteoglycans by insulin-like growth factor-1. *Yuzo Watanabe, Naoki Kashihara, Hirofumi Makino, and Yashpal S. Kcnwar* 1262

CLINICAL INVESTIGATION

Contrast nephropathy in patients with impaired renal function: High versus low osmolar media. *Brendan J. Barrett, Patrick S. Parfrey, Hilary M. Vavasour, Jackie McDonald, Gloria Kent, Donna Hefferton, Frank O'Dea, Eric Stone, Raj Reddy, and Patrick J. McManamon* 1274

Toxicity of osmotic solutes on human mesothelial cells in vitro. *Andrzej Breborowicz, Helen Rodela, and Dimitrios G. Oreopoulos* 1280

Survival as an index of adequacy of dialysis. *Bernard Charra, Edouard Calemard, Martial Ruffet, Charles Chazot, Jean-Claude Torrat, Thierry Vanel, and Guy Laurent* 1286

Fistula dysfunction: Effect on rapid hemodialysis. *Deirdre M. Collins, Michael B. Lambert, John P. Middleton, Rebecca K. Proctor, Charles J. Davidson, Glenn E. Newman, and Steve J. Schwab* 1292

Renal hemodynamics and reduction of proteinuria by a vasodilating beta blocker versus an ACE inhibitor. *Christine M. Erley, Ulrike Harrer, Bernhard K. Krämer, and Teut Risler* 1297

Association of IgM with IgG ANCA in patients presenting with pulmonary hemorrhage. *Vincent L.M. Esnault, Behzad Soleimani, Mary T. Keogan, Alan A. Brownlee, David R.W. Jayne, and C. Martin Lockwood* 1304

Factors affecting the progression of renal disease in autosomal-dominant polycystic kidney disease. *Patricia A. Gabow, Ann M. Johnson, William D. Kaehny, William J. Kimberling, Dennis C. Lezotte, Irene T. Duley, and Richard H. Jones* 1311

A quantitative description of solute and fluid transport during peritoneal dialysis. *Olof Heimburger, Jacek Waniewski, Andrzej Werynski, and Bengt Lindholm* 1320

Atrial natriuretic peptide kinetic studies in patients with cardiac dysfunction. *Johannes Hensen, William T. Abraham, Edward J. Lesneefsky, Benny Levenson, Bertron M. Groves, Klaus Schröder, Robert W. Schrier, and Jacques Dürr* 1333

Effect of fluoride on aluminum-induced bone disease in rats with renal failure. *Thomas H. Ittel, Eduard Gruber, Andreas Heinrichs, Stefan Handt, Ferdinand Hofstädter, and Heinz-Günter Sieberth* 1340

Single kidney function: Early and late changes in urate transport after nephrectomy. *Ifigenia Magoula, Georges Tsapas, Konstantinos Mavromatidis, and Anastasios Katinios* 1349

The pathology of subclinical pyelonephritis—An experimental evaluation. *Thomas E. Miller, Glenne Findon, Stephen P. Rainer, and John B. Gavin* 1356

A model of the volumetrically-controlled hemodialysis circuit. *Thomas L. Pallone, Scott W. Hyver, and Jeffrey Petersen* 1366

Non-invasive prediction of aluminum bone disease in hemo- and peritoneal dialysis patients. *York Pei, Gavril Hercz, Celia Greenwood, Donald Sherrard, Gino Segre, Arif Manuel, Carl Saiphoo, and Stanley Fenton* 1374

A new scintigraphic method to characterize ultrafiltration in hollow fiber dialyzers. *Claudio Ronco, Alessandra Brendolan, Mariano Feriani, Massimo Milan, Piero Conz, Andrea Lupi, Paolo Berto, MariaCostanza Bettini, and Giuseppe La Greca* 1383

Contents continued on next page

Lipoprotein abnormalities in hyperlipidemic and normolipidemic men on hemodialysis with chronic renal failure. *Mariano Sentí, Ramón Romero, Juan Pedro-Botet, Antonio Pelegrí, Xavier Nogués, and Juan Rubiés-Prat* 1394

Removal of aluminoxamine and ferrioxamine by charcoal hemoperfusion and hemodialysis. *Dimitrios M. Vasilakakis, Patrick C. D'Haese, Ludwig V. Lamberts, Eleni Lemoniatou, Panagiotis N. Digenis, and Marc E. De Broe* 1400

Radiocontrast-induced nephropathy in humans: Role of renal vasoconstriction. *Lawrence S. Weisberg, Peter B. Kurnik, and Brenda R.C. Kurnik* 1408

NEPHROLOGY FORUM

Dialysis-related amyloidosis. *Karl M. Koch* 1416

ABSTRACTS

Dutch Society of Nephrology 1430

Italian Society of Nephrology 1439

Korean Society of Nephrology 1448

Turkish Society of Nephrology 1466

INTERNATIONAL SOCIETY OF NEPHROLOGY

Reduced Subscription rates for Fellows 1474

Meetings 1476

Awards and Grants 1481

Erratum 1482

KIDNEY INTERNATIONAL

Volume 41, Supplement 36

Renal Protective Aspects of Calcium Antagonists

International Workshop

Florence, Italy

April 14–16, 1991

Table of contents

Introduction. *Gerald F. DiBona, Murray Epstein, Johannes S. Mann, and Margareta Nordlander.* S-1

MECHANISMS OF RENAL DISEASE PROGRESSION—EXPERIMENTAL DATA

Role of calcium in the progression of renal disease: Experimental evidence. *Herbert J. Kramer, Harald Meyer-Lehnert, and Markus Mohaupt* S-2

Glomerular hemodynamics in progressive renal disease. *Jarle Ofstad, Gunnar Horvei, Fred I. Kvam, Lars Mørkrid, Ingegjerd Sekse, Einar Svarstad, and Bjarne M. Iversen* S-8

Growth factors and glomerular sclerosis. *A. Meguid El Nahas* S-15

The potential role of ischemia in renal disease progression. *Bruce A. Molitoris* S-21

MECHANISMS OF RENAL DISEASE PROGRESSION—CLINICAL DATA

Means of clinical evaluation of renal disease progression. *Ronald D. Perrone* S-26

Does essential hypertension cause end-stage renal disease? *Joseph M. Weisstuch and Lance D. Dworkin* S-33

Determinants of progressive renal disease in diabetes mellitus. *Mattias Aurell and Staffan Björck* S-38

EFFECTS OF CALCIUM ANTAGONISTS ON NORMAL RENAL FUNCTION

Effects of calcium antagonists on renal hemodynamics and glomerular function. *Pamela K. Carmines, Kenneth D. Mitchell, and L. Gabriel Navar* S-43

Renal tubular effects of calcium antagonists. *Pierre Larochelle* S-49

Renal effects of felodipine—A review. *Dag Elmfeldt, Margareta Nordlander, and Boo Edgar.* S-54

THERAPEUTIC OPTIONS IN THE MANAGEMENT OF PROGRESSIVE RENAL DISEASE WITH FOCUS ON CALCIUM ANTAGONISTS

Progression of renal disease: Current concepts and therapeutic approaches. *Jacques J. Bourgoignie* S-61

Calcium antagonists and the kidney: Implications for renal protection. *Murray Epstein* S-66

EFFECTS OF CALCIUM ANTAGONISTS IN VARIOUS RENAL DISORDERS

Is natriuresis on felodipine due to reversal of the renal effects of angiotensin II? *Henk W. van Hamersvelt, Henk E. Sluiter, Jack F.M. Wetzels, Robert A.P. Koene, and Frans Th.M. Huysmans* S-73

Hemodynamic comparisons of enalapril and felodipine and their combination. *Trefor O. Morgan and Adrianne Anderson* S-78

Interaction between cyclosporine and felodipine in renal transplant patients. *Erling B. Pedersen, Søren S. Sørensen, Hans Eiskjær, Henrik Skovbon, and Klaus Thomsen* S-82

Contents continued on next page

Protective effects of calcium antagonists in human renal transplantation. *Hans-Hellmut Neumayer, Ulrich Kunzendorf, and Matthias Schreiber* S-87

Evaluation of the efficacy of felodipine in two models of acute renal failure in dogs. *Madhu S. Chintala and Bhagavan S. Jandhyala* S-94

Effects of chronic felodipine treatment on renal function and morphology in SHR. *Margareta Nordlander and Niilo Havu* S-100

Acute renal effects of felodipine in hypertensive patients with kidney disease. *Frans Th.M. Huysmans, Henk W. van Hamersvelt, Henk E. Sluiter, Jack F.M. Wetzels, and Robert A.P. Koene* S-106

Long-term effects of felodipine in patients with reduced renal function. *Hans Herlitz* S-110

SUMMARY

Are calcium antagonists of value in ameliorating the course of chronic renal disease? *Friedrich C. Luft and Colin I. Johnston* S-114

KIDNEY INTERNATIONAL

Volume 41, Number 6, June 1992

Official Journal of the International Society of Nephrology

Le Journal Official de la Société Internationale de Néphrologie

Table of contents

EDITORIAL REVIEW

Thromboxane synthesis and action within the kidney. *Giuseppe Remuzzi, Garret A. FitzGerald, and Carlo Patrono* 1483

LABORATORY INVESTIGATION

Acute phosphate depletion and in vitro rat proximal tubule injury: Protection by glycine and acidosis. *Antonio R.P. Almeida, Jack F.M. Wetzels, Derek Bunnachak, Thomas J. Burke, Cidio Chaimovitz, William S. Hammond, and Robert W. Schrier* 1494

Impaired phagocytosis in chronic renal failure is mediated by secondary hyperparathyroidism. *Indira Chervu, Maciej Kiersztejn, Jadwiga M. Alexiewicz, George Z. Fadda, Miroslaw Smogorzewski, and Shaul G. Massry* 1501

Culture of endothelial cells from baboon and human glomeruli. *Dollie Florence Green, Kay H. Hwang, Una S. Ryan, and Jacques J. Bourgoignie, with the technical assistance of Jennifer Baker*..... 1506

Depletion of CD8 positive cells in nephrotoxic serum nephritis of WKY rats. *Katsutoshi Kawasaki, Eishin Yaoita, Tadashi Yamamoto, and Itaru Kihara* 1517

Effects of salt restriction on renal growth and glomerular injury in rats with remnant kidneys. *Douglas S. Lax, Judith A. Benstein, Evelyn Tolbert, and Lance D. Dworkin* 1527

Chronic metabolic acidosis accelerates whole body proteolysis and oxidation in awake rats. *Robert C. May, Tahsin Masud, Brian Logue, James Bailey, and Brian England* 1535

Synthesis and metabolism of the cysteinyl leukotrienes by the isolated pig kidney. *Kevin P. Moore, Graham W. Taylor, Christopher Gove, John Wood, Kai-Chah Tan, John Eason, and Roger Williams* 1543

Importance of NO/EDRF for glomerular and tubular function: Studies in the isolated perfused rat kidney. *Jörg Radermacher, Bernd Klanke, Hans-Joachim Schurek, Hilmar F. Stolte, and Jürgen C. Frölich* 1549

Long term effects of morphine on mesangial cell proliferation and matrix synthesis. *Pravin C. Singhal, Nora Gibbons, and Mirel Abramovici* 1560

Cell surface aminopeptidase A and N activities in human glomerular epithelial cells. *Vladisav Stefanovič, Predrag Vlahovič, Nicole Ardaillou, Pierre Ronco, and Raymond Ardaillou* 1571

Rapid oxygen-dependent changes in erythropoietin mRNA in perfused rat kidney: Evidence against mediation by cAMP. *Chorh C. Tan and Peter J. Ratcliffe* 1581

Direct amphotericin B-mediated tubular toxicity: Assessments of selected cytoprotective agents. *Richard A. Zager, Charles R. Bredl, and Brian A. Schimpf* 1588

CLINICAL INVESTIGATION

Hydrated clearance of gadolinium-DTPA as a measurement of glomerular filtration rate. *Peter L. Choyke, Howard A. Austin, Joseph A. Frank, Mary E. Girton, Richard L. Diggs, Andrew J. Dwyer, LaGrieta Miller, Robert Nussenblatt, Henry McFarland, and Theodore Simon* 1595

The sodium retaining effects of cyclosporine. *David L. Ciresi, Margaret A. Lloyd, Sharon M. Sandberg, Denise M. Heublein, and Brooks S. Edwards* 1599

Contents continued on next page

Childhood membranoproliferative glomerulonephritis type I: Limited steroid therapy. *Douglas M. Ford, David M. Briscoe, Paul F. Shanley, and Gary M. Lum* 1606

Carnitine metabolism during exercise in patients on chronic hemodialysis. *William R. Hiatt, Brian J. Koziol, Joseph I. Shapiro, and Eric P. Brass* 1613

Protein intake and blood glucose as modulators of GFR in hyperfiltering diabetic patients. *Sharon L. Jones, Panayotis Kontessis, Martin Wiseman, Rosemary Dodds, Emilio Bognetti, Jose Pinto, and Giancarlo Viberti* 1620

Immunochemical studies of the Alport antigen. *Mary M. Kleppel, Wei Wei Fan, Hae Il Cheong, Clifford E. Kashtan, and Alfred F. Michael* 1629

Expression of a monoclonal antibody (3G5) defined ganglioside antigen in the renal cortex. *Ramesh C. Nayak, Mohamed A. Attawia, Christopher J. Cahill, George L. King, Hiromi Ohashi, and Rocio Moromisato* 1638

Cervical discs are most susceptible to beta$_2$-microglobulin amyloid deposition in the vertebral column. *Kenichi Ohashi, Mitsuru Hara, Ryuko Kawai, Yosuke Ogura, Kazuho Honda, Hiroshi Nihei, and Nobuhide Mimura* 1646

Impaired metabolism of high density lipoprotein in uremic patients. *Tetsuo Shoji, Yoshiki Nishizawa, Hiroshi Nishitani, Makoto Yamakawa, and Hirotoshi Morii* 1653

Treatment of chronic hyponatremia in rats by intravenous saline: Comparison of rate versus magnitude of correction. *Alain Soupart, Raymond Penninckx, Alain Stenuit, Olivier Perier, and Guy Decaux* 1662

Indirect measurement of lymphatic absorption in CAPD patients is not influenced by trapping. *Dirk G. Struijk, Gerardus C.M. Koomen, Raymond T. Krediet, and Lambertus Arisz* 1668

Experimental chronic renal ischemia: Morphologic and immunologic studies. *Luan D. Truong, Anwar Farhood, Jerry Tasby, and David Gillum* 1676

Anti-DNA antibodies form immune deposits at distinct glomerular and vascular sites. *Demetrios V. Vlahakos, Mary H. Foster, Sharlene Adams, Michael Katz, Angelo A. Ucci, Kathleen J. Barrett, Syamal K. Datta, and Michael P. Madaio* 1690

TECHNICAL NOTE

An accurate practical method for estimating GFR in clinical studies using a constant subcutaneous infusion. *Amira Al-Uzri, Malcolm A. Holliday, John G. Gambertoglio, Morris Schambelan, Barry A. Kogan, and Burl R. Don* 1701

Extraction of protein bound ligands from azotemic sera: Comparison of 12 deproteinization methods. *R. Vanholder, N. Hoefliger, R. De Smet, and S. Ringoir, with the technical assistance of P. Vogeleere* 1707

RAPID COMMUNICATION

Endothelin-1 receptor antagonist: Effects on endothelin- and cyclosporine-treated mesangial cells. *Michio Takeda, Matthew D. Breyer, Thomas D. Noland, Toshio Homma, Richard L. Hoover, Tadashi Inagami, and Valentina Kon, with the technical assistance of Diedriene M. Fredin and Samuel E. Hellings* 1713

NEPHROLOGY FORUM

Pathogenesis of IgA nephropathy. *Leendert A. van Es* 1720

INTERNATIONAL SOCIETY OF NEPHROLOGY

Reduced membership for Fellows 1730

Meetings 1730

Awards and Grants 1736

Contents continued on next page

ACKNOWLEDGMENT OF REFEREES 1741
INDEX TO VOLUME 41 1747

Instructions for Authors on page xxiii

KIDNEY INTERNATIONAL

Volume 41, Supplement 37

Cardiovascular and Renal Control of Blood Pressure

Villeneuve-les-Avignon, France

October 31–November 1, 1991

Table of contents

INTRODUCTION. *Jean-Luc Elghozi and John P. Chalmers* S-1

NEURAL CONTROL OF BLOOD PRESSURE

Amino acid neurotransmitters in hypertension. *Leonard Arnolda, Jane Minson, Vimal Kapoor, Paul Pilowsky, Ida Llewellyn-Smith, and John Chalmers* S-2

Central monoamine neurons and cardiovascular control. *Geoffrey A. Head* S-8

Spectral analysis of short-term blood pressure and heart rate variability in uremic patients. *Laure Cloarec-Blanchard, Arlette Girard, Sami Houhou, Jean-Pierre Grünfeld, and Jean-Luc Elghozi* S-14

Arterial pressure control in the sympathectomized rat. *Christian Barrès, Claude Julien, and Jean Sassard* S-19

Twenty-four hour blood pressure variability: Clinical implications. *Gianfranco Parati, Stefano Omboni, Marco Di Rienzo, Alessandra Frattola, Fabio Albini, and Guiseppe Mancia* S-24

Baroreflex control of regional vascular resistances during simulated orthostatism. *Alain Berdeaux, Jacques Duranteau, Eric Pussard, Alain Edouard, and Jean-François Giudicelli* ... S-29

Adrenocorticotrophin and steroid-induced hypertension in humans. *Judith A. Whitworth* S-34

HEART AND ARTERIAL WALL IN HYPERTENSION

Are cardiac and vascular "amplifiers" both necessary for the development of hypertension? *Paul I. Korner, Alexander Bobik, and James A. Angus* S-38

Remodeling of the heart (membrane proteins and collagen) in hypertensive cardiopathy. *Claude Sainte Beuve, Christophe Leclercq, François Rannou, Patricia Oliviero, Pascale Mansier, Brigitte Chevalier, Bernard Swynghedauw, and Danièle Charlemagne* S-45

Angiotensin II, vascular structure and blood pressure. *Anthony F. Lever, Fiona Lyall, James J. Morton, and Bjorn Folkow* S-51

Sympathetic innervation of renal and extra-renal arterial vessels. *Elspeth M. McLachlan and Susan E. Luff* S-56

Arterial hypertension and aneurysmal dilatation. *Samy Anidjar, Mary Osborne-Pellegrin, Michèle Coutard, and Jean-Baptiste Michel* S-61

Effects of monohydroxylated fatty acids on arterial smooth muscle cell properties. *Isabelle Ramboer, Patrice Blin, Geneviève Lacape, Daniele Daret, Jean-Marie Daniel Lamaziere, and Jacky Larrue* S-67

Release of endothelium-derived relaxing factor from resistance arteries in hypertension. *James A. Angus, Ann C. Dyke, Garry L. Jennings, Paul I. Korner, Krishnankutty Sudhir, Jane E. Ward, and Christine E. Wright* S-73

Regulation of membrane phospholipid metabolism in heart cell culture. *Mariane M. Freyss-Beguin, Elisabeth M. Millanvoye-Van Brussel, Josiane M. Simon, and Dominique P. Duval* .. S-79

The cytoskeleton of arterial smooth muscle cells during human and experimental artheromatosis. *Alexis Desmoulière and Giulio Gabbiani* S-87

Contents continued on next page

FLUID AND ELECTROLYTES HOMEOSTASIS

Dietary salt and risk factors for cardiovascular disease. *Lawrence J. Beilin* S-90

Effect of CRF, ACTH and adrenal steroids on sodium intake and excretion of rabbits. *Eva Tarjan, Derek A. Denton, Tania Ferraro, and Richard S. Weisinger* S-97

Common aspects of the cerebral regulation of thirst and renal sodium excretion. *Michael J. McKinley* S-102

Aging and sodium homeostasis. *Albert Mimran, Jean Ribstein, and Bernard Jover* S-107

Enzymes and the regulation of sodium balance. *John W. Funder* S-114

Na-K-ATPase in the kidney tubule in relation to natriuresis. *Alain Doucet* S-118

Studies on blood pressure regulation in hypertensive ren-2 transgenic rats. *Graham L. Barrett and John J. Mullins* S-125

Instructions for Authors on page iv